Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

serve
1281.9
F76Fm

LIBRARY
APR 29 1958
U. S. DEPARTMENT OF AGRICULTURE

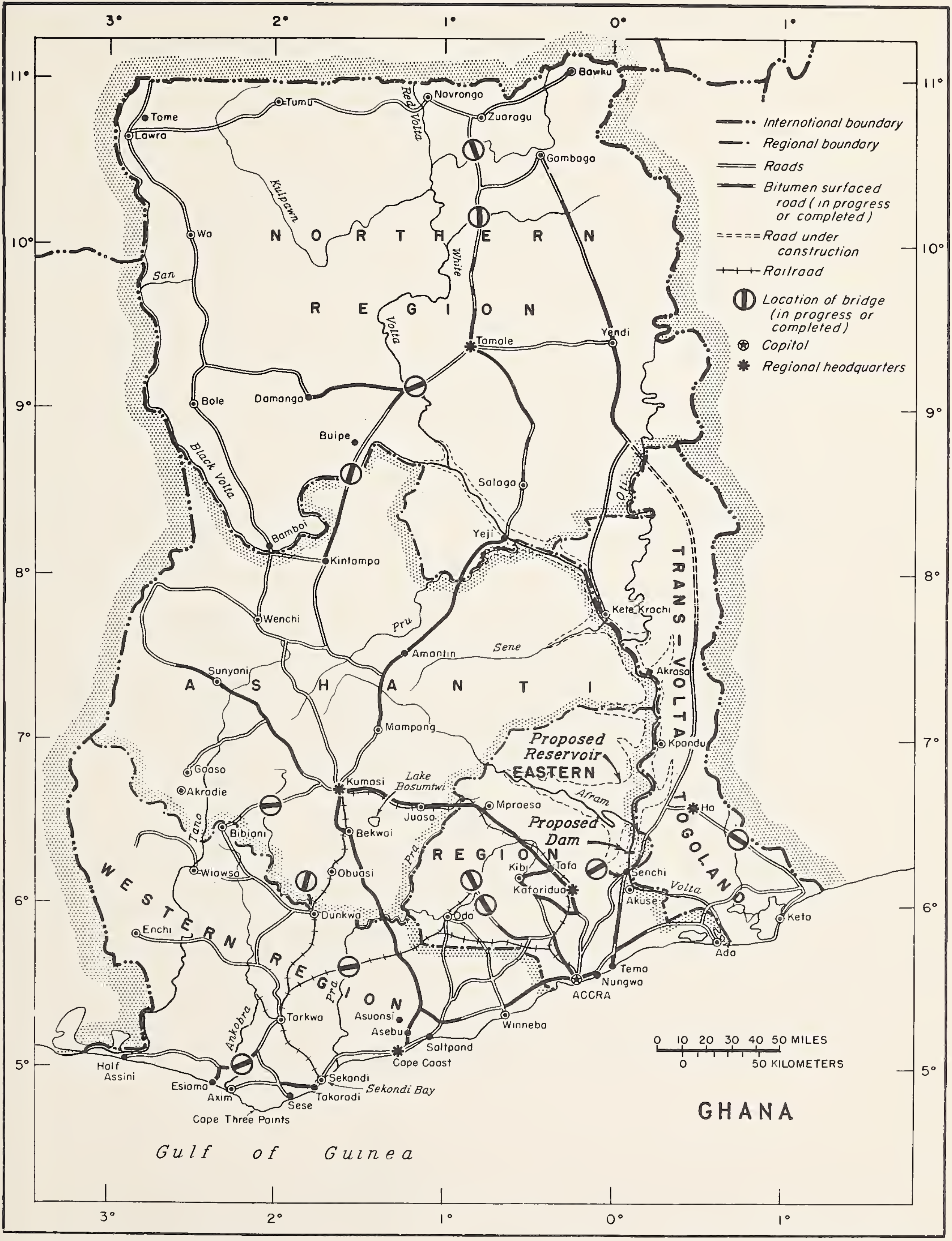
7 (U.S. 5c

FAS-M-34 April 1958
Foreign Agricultural Service
U. S. DEPARTMENT OF AGRICULTURE

3

GHANA'S

Agriculture and trade in farm products



U S DEPARTMENT OF AGRICULTURE NEG 752 FOREIGN AGRICULTURAL SERVICE

CONTENTS

Page

Physical environment: 1
  Location and size 1
  Topography 1
  Climate 2
  Soils 5
Agricultural patterns and policies: 6
  Land use 6
  Land tenure 7
  Production practices 7
  Marketing and transportation 8
  Agricultural organizations 10
  Government policies 10
  Farm credit 11
  Education, research, extension 11
Agricultural production: 11
  Export crops 11
  Domestic food and feed crops 19
  Livestock and products 22
International trade: 25
  Exports of agricultural commodities 25
  Imports of agricultural commodities 26
  Trade with the United States 28
  Sources of foreign exchange 30
  Government policy for trade 30
Long-range outlook for agriculture 31
  Production 31
  Consumption 32
  Standard of living 33
  U. S. share of agricultural trade 33

Agriculture - 5a Washington

GHANA'S AGRICULTURE AND TRADE IN FARM PRODUCTS

Snider W. Skinner
Africa and Middle East Branch, FAS

The Gold Coast, British colony on the west coast of Africa, received considerable attention from the world in March 1957. At that time, it took over responsibility for its own foreign affairs, changed its name to Ghana, and became the first Negro-populated and Negro-governed member of the British Commonwealth.

In Ghana, agriculture is the people's livelihood and in Ghana agriculture means mainly cocoa.

Ghana is important to the United States as a supplier of cocoa and as a market for U. S. wheat flour and tobacco.

As a colonial territory, the Gold Coast was divided into three political subdivisions -- the Northern Territories, Ashanti (in the center), and the Gold Coast Colony (along the coast). On the eastern border was Togoland, a United Nations Trusteeship which the British administered along with the Gold Coast.

After independence, the northern part of Togoland was added to the Northern Territories and the combined area renamed the Northern Region. Ashanti remained as before. The Gold Coast Colony was divided and renamed Western Region and Eastern Region. The part of the Colony east of the Volta River was added to the remainder of British Togoland to form the region of Trans-Volta Togoland.

PHYSICAL ENVIRONMENT

Location and Size

Ghana is located about midway along the south side of Africa's great western bulge. It falls between 1°12' east and 3°15' west longitude and 4°45' and 11°11' north latitude. The capital, Accra, lies almost on the Greenwich (0°) Meridian at 0°10' west longitude, about the same longitude as Regent's Park in London. Ghana's south coast is on the Atlantic Ocean and its land borders are shared with French West Africa and French Togoland. With an area of 91,843 square miles, it is about 80 percent larger than England and slightly larger than Oregon. In area, Ghana makes up less than 1 percent of Africa.

Topography

Ghana has considerable variation in physical features and climate, but nearly the entire area is suitable for agriculture of one type or another.

Ghana has no mountains, but some fairly high land masses can be classified as hills. The high point, 2,900 feet above sea level, is along the boundary between Ghana and French Togoland. Average elevation is about 800 feet.

In its relief Ghana repeats the usual West African coast features. There is a coastal plain, although along the middle coast it gives way to higher ground with cliffs. Behind the plains is a range of hills, drained by short streams heading south to the Atlantic Ocean. North of the range of hills the land falls again to the broad plain of the Volta River and its tributaries. Two-thirds of Ghana is within the Volta Basin. The main tributary, the Black Volta, rises far to the northwest in French West Africa, forms the western boundary of the Northern Region, then winds across the center of the country, forming a part of the boundary between Ashanti and the Northern Region. After mingling its waters with the White Volta, the river is known simply as the Volta. In its journey south and southeast to the Gulf of Guinea, the Volta forms most of the boundary between Ashanti and Trans-Volta Togoland and the Eastern Region and Trans-Volta Togoland.

The Volta is narrow, rather deep and fast, but without rapids. At Ajena it passes between two hills; here is planned a large dam for creating electricity. The backed-up lake would be one of the world's largest and longest man-made lakes, extending northward to the confluenc~~e of~~ the Black ~~and~~ White Volt~~as.~~

Ghana's rivers are not used much for transportation.

Climate

Ghana has a tropical climate. Temperature varies from area to area but is sufficiently high in all areas and in all seasons for the production of tropical products; it is not, therefore, a significant factor in the sectional character of Ghana agriculture.

Annual rainfall ranges from less than 30 inches around Accra and 50 inches in the north to 80 inches in the extreme southwest. Largely because of differing rainfall, Ghana has four distinct climatological belts:

1. The coastal belt (average rainfall 29 inches) with a subtropical growth of palms and scrubs.

2. The southwest Axim corner (82 inches rainfall), a tropical rain-forest area with little commercial agriculture.

3. The central forest belt (58 inches rainfall), where most of the country's cocoa is grown.

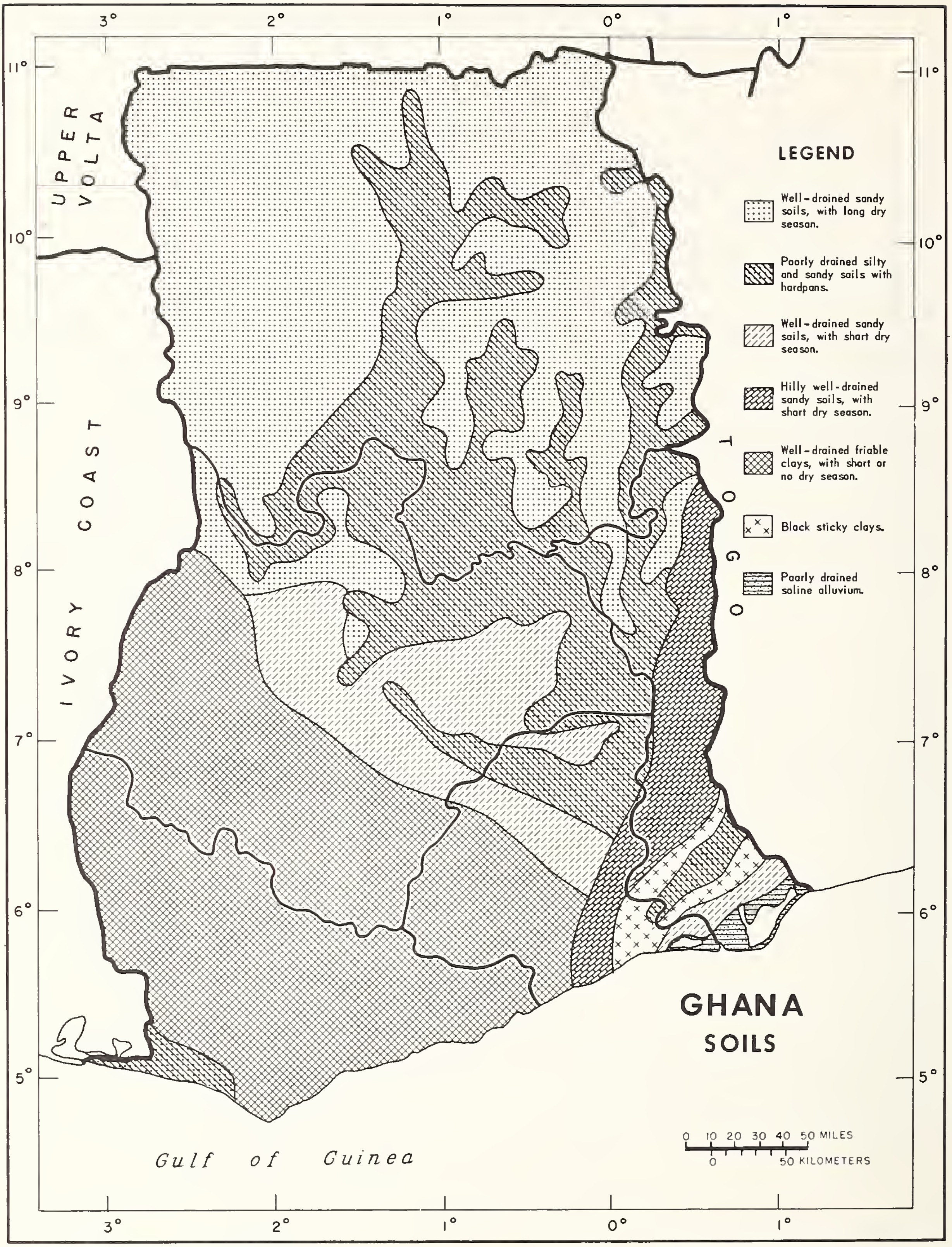
4. The northern belt (43 inches rainfall), a drier upland savanna of grass and shrubs, used mostly for livestock production.

The coastal belt lies east of Cape Three Points. Because of the change in the coastal direction at this point from east-southeast to east-northeast, the rain-bearing winds coming from the southwest blow almost parallel to the coast. As a result, the seasonal rainfall drops from nearly 60 inches near Takoradi to less than 30 inches at Accra. Rainfall is heaviest from March to July, although there is a secondary peak in October. This region is also noted for its relatively cool weather from June to September, when, judged from readings taken in Accra, the average maximum temperature is only 82° to 85°F. and the average minimum 71° to 75°. Among coastal equatorial regions, this is probably unique for its low rainfall and cool weather.

Toward the extreme southwestern corner, west of Cape Three Points, the average rainfall is much heavier, exceeding 85 inches in places, and the climate is more typical of the latitude. In this region there are two marked rainy seasons, the heavier one in May and June and the second season in October and November. Temperatures are more uniform than in the coastal belt, although the weather is a little cooler during the period from June to September than it is for the rest of the year.

The forest belt includes the rest of the Eastern and Western Regions (except the extreme northeastern part) and the southwest two-thirds of Ashanti. This area roughly coincides with the cocoa-producing area. Rainfall ranges from 45 to 80 inches per year, with a relatively dry spell from December to February, and again in August. Over the rest of the year, the rainfall is fairly uniform, although there are definite heavier seasons in May and June and again in September and October. Temperatures are slightly higher than in the southwestern corner but follow the same annual pattern, with a relatively cool period from July to September.

In the northern savanna region, the average maximum temperature is over 90°F. during most of the year, but reaches 100° in February and March. A small drop in temperature from July to September coincides with the middle of the rainy season. By December, all rain ceases, and the monsoon-created harmattan - a dry, dusty, and highly dessicative wind from off the great Sahara Desert to the north - begins carrying dust for the full breadth and depth of the region. This wind lasts for several months. Meanwhile, the daytime temperature rises to about 95°F., and the atmospheric humidity drops. When the harmattan is not blowing, the relative humidity is usually high, averaging about 80 percent. The long dry spell limits agriculture to annual crops and to cattle raising.


3°
2°
1°
0°
1°
11°
10°
9°
8°
7°
6°
5°
UPPER VOLTA
IVORY COAST
TOGO
LEGEND
Well-drained sandy soils, with long dry season.
Poorly drained silty and sandy soils with hardpans.
Well-drained sandy soils, with short dry season.
Hilly well-drained sandy soils, with short dry season.
Well-drained friable clays, with short or no dry season.
Black sticky clays.
Poorly drained saline alluvium.
GHANA
SOILS
0 10 20 30 40 50 MILES
0 50 KILOMETERS
Gulf of Guinea

U.S. DEPARTMENT OF AGRICULTURE NEG. 1586 FOREIGN AGRICULTURAL SERVICE

Soils

Ghana soils are predominantly of the Red Laterite type common to tropical West Africa.

Seven general soil types, all closely associated with types of natural vegetation, are shown on the map. The map is based on numerous regional surveys, but not all areas, particularly in the north, have been surveyed. In fact, at the end of 1955, only about 20 percent of Ghana had been covered by soil surveys. However, these surveys give a key to information on soils of a much larger area.

Well - drained sandy soils with a long dry season (Red and Yellow Latosols and Red Yellow Podzolic soils) are found mostly in the Northern Region, with smaller portions in Ashanti and Trans-Volta Togoland. Grasses are the dominant type of vegetation on these soils. Possibly, in all this area, savanna has followed the clearing of the forests. In dry weather these soils are subject to serious wind erosion unless protected from harmattan winds by a cover crop.

Poorly drained silty and sandy soils with hardpans (Ground Water Laterites) cover large areas of the Northern Region, Trans-Volta Togoland, Ashanti, and the Western Region. These are the country's poorest soils. The profile (the arrangement and character of the different soil layers) consists of a few inches of grayish silty or fine-sandy loam overlying 2 to 3 feet of ironstone concretionary clay or ironpan resting on impervious clayey, weathered rock. The soils occur on gentle topography and are badly drained in the rainy season; on the other hand, they dry out quickly in the dry season. They are almost devoid of nutrients and have little capacity to hold nutrients which might be added as fertilizers. They are little farmed at present and have almost no capacity for agricultural development. Near settlements they supply rough grazing for stock.

Well-drained sandy soils with a short dry season (Red and Yellow Latosols and Red Yellow Podzolic soils) cover the main range of hills in the south-central part of the country. Much of the land is in reserve forests. Cocoa is extensively grown.

Hilly, well-drained sandy soils with a short dry season (Red and Yellow Latosols and Red Yellow Podzolic soils) are found in Trans-Volta Togoland and the Eastern Region. In the area of these soils is the highest point in Ghana. The area contains some forest reserves and is used extensively for cocoa. Erosion is becoming a serious problem as sloping areas are more intensively farmed.

The soils best suited to cocoa are well-drained friable clays, with short or no dry season (Red and Yellow Latosols). These soils are found in southwest Ashanti, nearly all of the Western Region, and a part of the Eastern Region. A common profile consists of a 1- to 3-inch surface layer of dark grayish-brown clay loam full of decayed vegetable matter. Below this is a red to brown sandy layer of friable soil about a foot thick. This gives way to red clay containing small ironstone pebbles or concretions and quartz gravel, locally known as laterite. Red clay may extend downward, becoming mottled with yellowish-white clay and merging into the rotted parent rock or weathered granite.

Black sticky clays (Tropical Black Clays, with some Solonetz) are found in the Eastern Region and southern Trans-Volta Togoland. These soils are found in the Accra Plains, an area of over 500,000 acres. This area has an elevation of about 250 feet and is gently undulating and nearly treeless. Its rainfall is variable and unreliable, ranging between 25 and 42 inches per year. It is now being used for raising cattle of poor quality at about 12 acres per head and for producing a little cassava. If the Volta dam is built, nearly 250,000 acres could be irrigated, and it is believed that with good management the area could produce rice, sugarcane, cotton, tobacco, corn, and pulses.

Poorly drained saline alluvium (alluvial soils), found along the eastern part of the coast, is of little agricultural importance at present.

AGRICULTURAL PATTERNS AND POLICIES

Land Use

Less than 4 percent of Ghana's area is in field crops. Another 10 percent is in cocoa and other tree crops. A large part of the remainder is in productive and savanna woodland.

In 1950, land use in Ghana was about as follows:

Agricultural land in --	1,000 acres	Percent
Cocoa	3,954	6.7
Other tree crops	1,826	3.1
Field crops	2,177	3.7
Fallow	2,572	4.4
Total agricultural land	10,529	17.9
Forest land:		
Productive	8,256	14.0
Savanna woodland	27,521	46.9
Total forest land	35,777	60.9
Built-on waste, and nonagricultural land	12,474	21.2
Total acreage	58,780	100.0

Land Tenure

Most farms in Ghana are independently operated units averaging 5 acres or less in size.

Private ownership of land is just now becoming a part of the economy. Communal or tribal ownership is the usual method of landholding. In the Northern Region all land is declared to be African land and is administered under the Native Rights Ordinance; no non-African can obtain the right to land without the government's consent. In Ashanti and the Eastern and Western Regions an African can give a right to land or make a sale to an individual or firm.

The right to use land (as contrasted to owning land) is rather freely granted, sometimes for cash rents.

Lack of a firm title to land limits the cocoa grower's ability to borrow money to meet expenses for the several years required to bring his cocoa trees into bearing.

Grazing and hunting rights are of a common nature. Anyone is free to graze his cattle on any land not actually growing crops. Anyone can hunt on another's land without committing trespass.

Tenancy is not common in Ghana. Some farmers, however, lease part of their land after it is planted to cocoa or operate the land with hired labor. In some cocoa-growing areas a few farmers control holdings of 60 to 100 acres or more on which a system of tenants and paid labor prevails. Apparently some operators prefer to devote their time to clearing land and setting out new cocoa plantings, leaving tenants or hired labor to care for the young trees and to harvest the crop. Typically, however, the farmer and his family operate their own small holdings, devoting much or most of their time to the production of food crops. They grow cocoa or some other cash crop in order to provide themselves with the money they need to buy necessities for the family and a few tools, insecticides, and seeds for operating the farm. It is also common for one or more members of the family to work on roads, in forests, or in the elimination of the swollen shoot disease. Male members of families are sometimes away for long periods working in mines or industry, leaving the farm work to the women and children.

Production Practices

At least four factors influence the agricultural practices followed and the equipment used on Ghana farms:

1. Since the principal crop, cocoa, is grown in the woods, it is not necessary or practical to plow with horses, mules, or tractors.

2. Large areas of the country are infested with tsetse fly, making it impossible or impractical to keep horses, mules, and oxen for work stock.

3. The Red Laterite soils pack down so badly that heavy tractors cannot be used. In fact, "primitive" hand cultivation is the only practical method on many soils.

4. Unless kept covered with growing vegetation, the Ghana soils leach (lose their fertility) rapidly. Often the primitive "shifting cultivation" (in which the land is permitted to return to bush after 4 or 5 years of cultivation) is better for the land than continuous clean cultivation.

Because of these factors, hand cultivation with hoes, four-pronged forks, cutlasses, machetes, and just ordinary sharp sticks is common. In parts of the Northern Region, horse and ox power is used to pull simple plows and harrows.

A small beginning has been made in farm mechanization. Plans have been made for large-scale production of peanuts, millet, rice, and other crops by mechanical means at Damongo in the Northern Region and at Amantin in northern Ashanti. Some pilot plots have been put into cultivation.

In 1954 there were 125 agricultural tractors in Ghana. Fuller descriptions of farming methods are given later in connection with principal crops grown.

Marketing and Transportation

Two quasi-governmental agencies -- the Cocoa Marketing Board and the Ghana Agricultural Development Corporation -- handle the chief export crops. (The Cocoa Marketing Board is described later in connection with the crop.)

The Agricultural Development Corporation sets season prices and handles exports of coffee, palm kernels, copra, and shea nuts. It also handles exports of bananas. The Corporation's total sales have been small in comparison with those of the Cocoa Marketing Board, but it seeks to find the way to much-needed diversification of Ghana's agriculture.

In practice, bananas have been one of the Corporation's most satisfactory products. Coffee has been something of a headache, as many Ghana coffee growers prefer to sell over the border to buyers in French territory, who have lower quality standards than the Corporation.

Shea nuts are gathered from trees throughout the Northern Region. The shea nut kernels produce "shea butter," widely used locally for cooking, lighting, and anointing the body. Recently, the Agricultural Development

Corporation has exported a few hundred tons of shea nuts a year.

The marketing of export crops through these two agencies has led to more systematized grades and standards and a more uniform product. Internal trade in domestic foods is handled by Africans.

Railroad and road facilities are only fairly adequate in Ghana. The total length of 720 miles of railroad is all government-owned. Main lines run from Takoradi to Kumasi and from Accra to Kumasi. Trains from Takoradi to Accra formerly had to make the trip via Kumasi but now save 160 miles via a new stretch of cut-off track. Northern Ashanti, the Northern Region, and Trans-Volta Togoland have no railroads.

Main railroad freight consists of cocoa, bauxite, and manganese.

The Public Works Department of Ghana maintains 4,183 miles of motor roads, of which 1,319 miles have bituminous surfaces. Regional governments and other organizations maintain 8,399 miles of roads and paths. It is now possible to travel via hard-surfaced road from Tumu almost on the northern border via Tamale and Kumasi to Accra on the coast.

Large numbers of trucks, buses, and automobiles make use of the Ghana road system, which is an invaluable link in getting Ghana's cocoa and other products to the coast for shipment. Northern Ashanti and the Northern Region are deficient in roads, but the Ghana Government plans an ambitious road-building program which will bring good roads to these areas as well as the other sections of the country.

Only small use is made of the inland waters.

Ghana's major seaport is at Takoradi, the only port where ocean vessels can come alongside the dock. Storage facilities for 40,000 tons of cocoa are located there, since it is the loading point for most cocoa shipments.

Ships unloading at Accra must anchor out in the Gulf of Guinea and unload onto surf boats manned by skilled African "boat boys." Freight gets rough handling and packages are often lost in the water. In 1955, in spite of the obvious disadvantages of Accra as a port, 512,000 tons of freight were unloaded there, in comparison with 854,000 tons at Takoradi. Loading onto ships was mostly done at Takoradi (1,272,000 tons) as compared with only 69,000 tons loaded at Accra's surf port.

A new deepwater port under construction at Tema, 14 miles east of Accra, will give needed port facilities for shipping cocoa and other Ghana products and for unloading goods imported from other countries.

Sixteen ocean shipping lines give Ghana excellent freight and passenger service to and from the countries of the world.

A number of major airways give good passenger service to Ghana but are not significant as freight carriers.

Agricultural Organizations

Because of the dominance of agriculture in Ghana, almost all organizations, public and private, are concerned with cocoa and other agricultural products. In the government, the Department of Agriculture is the agency directly concerned with agriculture and its possibilities and problems.

The Department of Agriculture in 1950 included four main divisions concerned with the following fields: (1) Cocoa, (2) soil survey, (3) agricultural research and extension, and (4) control and administration.

The Cocoa Survey is concerned primarily with combating swollen shoot.

The Soil Survey Unit of the Department concerns itself primarily with locating the areas suitable for cocoa production. It is also making surveys in the areas likely to be irrigated, determining the crops to grow in such areas and the best agricultural practices to follow in their production.

Most of the problems of crops other than cocoa are under the direction of the Department of Agriculture's research and extension program.

There are no large nation-wide farmers' organizations in Ghana to compare with the Farm Bureau, Farmers' Grange or Farmers' Union in the United States. As in all other facets of the nation's life, cocoa dominates the farmers' organizations. In 1954, there were 330 co-operative marketing primary societies. Together the primary cooperatives owned the Cooperative Marketing Association, which now rates as the leading buying agent of the Cocoa Marketing Board. It handled nearly a fifth of the cocoa sold. Some business was done by the cooperatives in coffee, copra, citrus fruits, and vegetables.

In the Northern Region, a start has been made in organizing cooperatives.

Government Policies

Ghana's chief preoccupation has been with swollen shoot; about 55 million infected cocoa trees have been destroyed in 10 years. In 1956 and 1957 the government instituted an active mass insecticide program against capsid insects which attack cocoa. Ghana has made a small start in trying to diversify its one-crop cocoa economy. Pilot estates have been started for corn, peanuts, rice, tobacco, oil palm, coffee, pineapples, market gardening, and fibers. The possibility of adapting cocoa to estate culture is also being looked into. The Volta River Project, for production of hydroelectric power for processing of large reserves of bauxite ores, would transform and strengthen the economy.

The quasi-official Cocoa Marketing Board and Agricultural Development Corporation set season prices for cocoa, coffee, palm kernels, copra, and shea nuts. The activities of these two organizations are treated more fully elsewhere in this study.

Farm Credit

While there is great need for agricultural credit, there are practically no facilities for making agricultural loans. The commercial banks, the Bank of West Africa, and Barclays Bank ordinarily do not make loans to farmers, often because of poor title to the land. The Bank of Ghana, serving as the official bank of the Government of Ghana, does not function as an agricultural credit institution.

Private lenders charge 50 percent or more interest per year.

In 1955 some loans were made to farmers by the Agricultural Development Corporation and some repayments were received.

The Co-operative Bank, Ltd., set up as a banking institution for cooperatives, was one of the first sources of agricultural credit.

Education, Research, Extension

Despite recent steps to decrease illiteracy, almost 80 percent of the people in 1953 could not read or write. It is significant that, although nearly 10 percent of the population were enrolled in schools in 1955, only about 60 percent of these can be expected to finish the primary grades. The educational system through high school includes six primary grades, four middle grades, and four secondary, or high school, grades.

In 1953, two institutions of higher learning were offering technical courses in agriculture -- the University College and the Kumasi College of Technology. However, many Ghana students are attending colleges in foreign countries. In 1954, 34 students were enrolled in agriculture in the United Kingdom, 2 in the Tropical College of Agriculture in Trinidad, British West Indies, and 19 in agricultural colleges in the United States.

Considerable agricultural extension work has been done in connection with swollen shoot, capsid, and black pod diseases of cocoa. More such work for other crops and for livestock, on a simple demonstration scale, is desirable and will undoubtedly come in due time. At present, too few qualified personnel are assigned to this task, and they are required to service too large areas.

AGRICULTURAL PRODUCTION

Export Crops

Cocoa, palm kernels, coconuts and copra, kola nuts, and coffee are the more important export crops of Ghana. For cocoa, palm kernels, copra, and coffee, production and exports are almost synonomous. Large quantities of coconuts and kola nuts are used where produced or in other parts of Ghana. Palm oil was formerly an export product; all of it is now used domestically. Palm oil is considered here with export crops because of its close relationship to palm kernels.

Principal export crops: Acreage and production

Crop and year produced	Area	Production
	1,000 acres	1,000 long tons
Cocoa (1956)	3,954	265
Palm kernels (1956)	1/	12 2/
Palm oil (1955)	1/	.4
Coconuts (1955)	30	15
Kola nuts (1956)	1/	12
Coffee (1956)	3.8	.8 2/

1/ Not available.

2/ Exports

Cocoa. -- Cocoa has a fairly recent history in Ghana, considering the dominant role it now plays in the country's economy and national life. Trees were first planted in 1890 and the first cocoa (40 long tons) was exported in 1896. Forty years later, 311,151 long tons were produced. This 1936 record has not since been equaled.

In recent years, nearly one-third of the world supply of cocoa beans has come from Ghana, the largest single producer. Cocoa accounts for 98 percent of the value of Ghana's agricultural exports. An estimated 250,000 to 300,000 persons (20 to 25 percent of the males of working age) spend at least part of their time in the production, farm processing, and marketing of cocoa. The inhabitants grow cocoa with such enthusiasm that it is difficult to interest them in growing other crops for food or for export.

Cocoa farmers produce cocoa on about 3,954,000 acres of land throughout the "high forest" zone, mostly in southern Ashanti and the Eastern Region.

Cocoa: Production and exports, average 1897-1945, annual 1946-56:

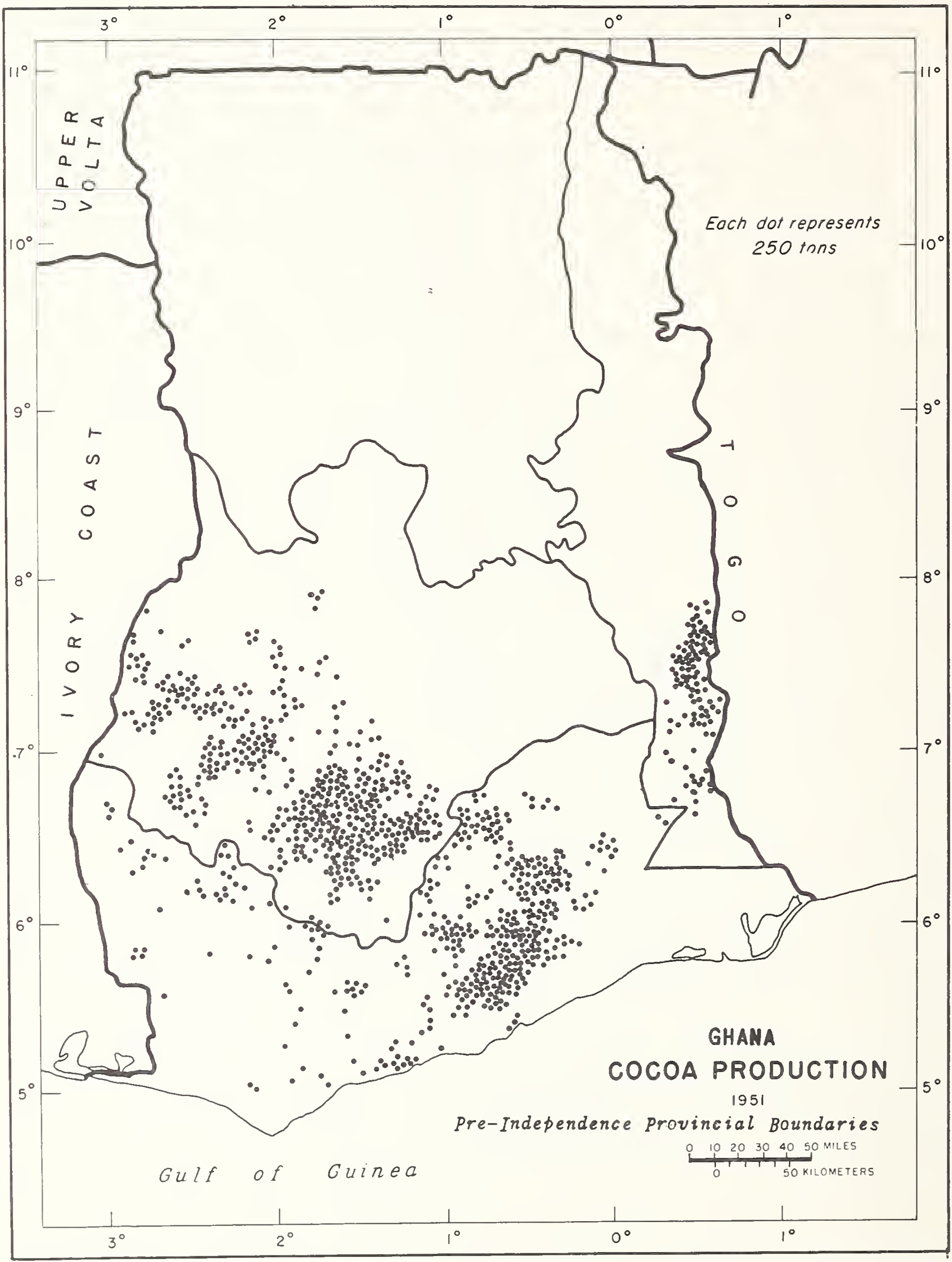
Period or year	Production	Exports 1/
	Long tons	Long tons
Average:		
1897-1901	2/	329
1902-1906	2/	4,771
1907-1911	2/	20,934
1912-1916	2/	58,306
1917-1921	2/	118,290
1922-1926	2/	205,859
1927-1931	2/	225,733
1932-1936	287,012	256,036
1936-1940	257,011	244,601
1942-1945	201,009	196.523
Annual:		
1946	191,009	180,239
1947	208,492	214,303
1948	278,205	263,603
1949	255,368	267,402
1950	263,405	229,526
1951	210,663	212,006
1952	246,983	236,635
1953	210,694	214,149
1954	220,107	205,875
1955	228,792	234,406
1956	264,741	2/

1/ Exports are from preceding year's crop.

2/ Not available.

Based on an area of 3,954,000 acres of cocoa trees, the yield of beans in 1956 was 150 pounds per acre. Very little of the local cocoa crop is consumed in Ghana, although some manufactured cocoa and chocolate and products are imported from Great Britain and other countries.

Cocoa planting -- a project for a lifetime, not for a year -- is done in the high forests. The undergrowth is cleared, leaving the 50-to-80 foot trees as shade and protection from winds. Seeds are planted, or young seedlings are transplanted. Cooking and fruit bananas may be interplanted among the young cocoa seedlings to serve as food crops and to give shade to the cocoa seedlings.



GHANA

COCOA PRODUCTION

1951

Pre-Independence Provincial Boundaries

U.S. DEPARTMENT OF AGRICULTURE NEG. 727 FOREIGN AGRICULTURAL SERVICE

The Amelonado is the most popular cocoa variety. It bears in 5 to 7 years, comes into full production at about 15 years, and continues to bear at the maximum rate for 20 years or more. Production then declines gradually but with good care trees will produce for 60 years or more. In recent years, seedlings of 10 higher-yielding cocoa varieties have been introduced from the Amazon Valley of Brazil and are being rather widely used for replanting.

The "main" cocoa harvest season begins in October and continues for 4 or 5 months. A much smaller "midseason" crop is gathered from April to June.

The cocoa pods -- about the size and shape of a child's football -- grow close to the trunk and large branches of the tree rather than at the end of the small branches or twigs. Not all of the pods ripen at once, so several harvests are made. The pods are cut off with knives or machetes.

The pods are cut open and the seeds and membrane piled together and covered with plantain leaves. The seeds heat, ferment, and most of the membrane drains away into the ground. The piles of fermenting beans are stirred and turned each two days. After 7 or 8 days, the beans are spread out to dry for 2 additional days on well-ventilated mats, or earthen drying floors. The cocoa beans are then ready to be carried in head loads of 60 pounds to the nearest licensed buying agent of the Cocoa Marketing Board. The beans are then graded, weighed, and paid for at a fixed season price.

The Board, formed in 1947 as an outgrowth of wartime controls, buys and exports all Ghana cocoa. It endeavors to secure the most favorable arrangements for the purchase, grading, export, and selling of Ghana cocoa. For a fixed fee its agents collect, store, and transport cocoa to ports, and load it on ships.

Prices paid by the Board (converted to cents per pound) have been as follows:

Year	Price per pound U. S. cents
1947-48	13
1948-49	22
1949-50	10
1950-51	16
1951-52	19
1952-53, Main crop, Grades 1 and 2	16
1952-53, Mid-crop Grade 1	17
1952-53, Mid-crop Grade 2	16
1953-54	17

Year	Price per pound U. S. cents
1954-55 Main crop	17
1954-55 Mid-crop	19
1955-56	19
1956-57 Main crop	19
1956-57 Mid-crop	17

During the period of high world cocoa prices, the Board accumulated large reserves for later price stabilization and for development of the country. By September 30, 1953 these reserves had reached $216 million. In later years of low world prices, the Board has had to draw on its reserves to maintain the yearly fixed price.

Since 1936, Ghana cocoa trees have been seriously damaged by swollen shoot disease. The internodes become swollen and begin to die back from the young twigs. Swollen shoot -- a virus disease carried from tree to tree by mealybugs -- rapidly reduces production and eventually kills the tree. Cutting out the infected trees is the only effective method developed so far for controlling the disease. About 55 million trees, for which the government paid indemnity, were cut out between 1946 and 1956. The worst swollen shoot infection has been around Koforidua.

Capsids (insects) also hurt cocoa. They feed on young trees and often destroy them. They also puncture young pods and reduce the yield of cocoa beans. In recent years the government has conducted an extensive spray program against capsids and has subdized the sale of knapsack sprayers to farmers.

Black pod is a fungus disease which attacks the growing cocoa pods and causes the beans to be unsaleable. Damage is greater in years of high humidity and heavy rainfall during the rainy season. Early careful removal of infected pods and prompt harvest of good ripe pods reduces the damage from this disease.

Palm oil and kernels. -- Palm kernels were Ghana's second most valuable agricultural export in 1956, but amounted to only 1 percent of all agricultural exports.

Area in oil palms is difficult to determine, as the trees grow wild, intermingled with other trees and with cassava and other food crops. The palms grow in a belt, rarely over 10 miles wide, between the rain forest and the coastal plains.

Except for a single oil palm plantation at Sese, near Takoradi, all palm oil and palm kernels are produced by semi-wild trees. Thus, oil palm fruits and kernels are "collected," not harvested from a cultivated crop. Using a rope made of piassava or other native fiber, the "collector" climbs to the crown of the oil palm and cuts down the fruits.

The fruit of the oil palm contains a kernel in a hard shell surrounded by a fleshy pulp (it can be roughly compared to a peach kernel inside the peach seed, surrounded by the fleshy "halves" of the peach). The oil palm yields two distinct types of oil:

1. Palm oil, extracted from the outside pulp by boiling or expression under pressure in a hand or power mill.

2. Palm kernel oil, produced by first cracking the seed and removing the kernel, and then crushing the kernel by carefully controlled methods.

Formerly, large quantities of palm oil were exported for making soap and margarine. No palm oil is now exported from Ghana. Large quantities continue to be used domestically for a rich and fattening palm-oil soup, for cooking oil, and for lighting and homemade soap.

Palm kernels are sent overseas for crushing. The oil is in particular demand for making shaving soaps with a stiff, fine-grained lather. The residual palm-kernel cake feeds cattle in the crushing country (Britain or the Netherlands, for example), rather than in Ghana.

Palm kernels for export are handled on a monopoly basis by the Agricultural Development Corporation. Exports in 1955 totaled 9,600 long tons valued at $949,000. Exports in 1956 amounted to 11,500 long tons worth $1,472,000.

Coconuts. -- This crop is more familiar to Americans than other Ghana crops. Americans have seen the hard, brown-husked coconuts in grocery stores. They may have bought one, punched out one of the three "eyes," drunk the cool, sweet "milk," and laboriously pried out the coconut meat for shredding or grating for use in cakes, pies, or candy.

In 1953, coconut trees covered about 30,000 acres extending in a narrow belt along the coast all the way across Ghana from French Togo to the Ivory Coast. Chief producing areas are at Keta, east of the Volta River, and at Cape Three Points in the southwest. Keta is afflicted by an unidentified coconut palm wilt and frequent drought; expansion of production is unlikely there. Cape Three Points is relatively disease-free and has plenty of rain, so coconut prospects are brighter.

Wild coconut palms come into bearing at 10 to 15 years, cultivated trees at about 7 years. Coconuts are harvested over a period of 20 to 30 years or until the trees grow so tall that coconut harvesters refuse to climb them.

The people of Ghana use some fresh coconuts at home. About 2 million fresh coconuts, requiring no processing, are exported yearly. Some surplus nuts are converted into copra (dried coconut meat) by sun-drying, smoking, or oven-drying. Smoking produces copra which makes oil suitable only for cheap candles or soap. Oven-dried copra is better and sun-dried is best; both of these kinds produce edible oils. All kinds are hydroscopic; that is, they easily absorb water from the atmosphere.

Exports of copra in 1955 totaled 3,000 long tons valued at $420,000; in 1956, 4,700 long tons valued at $638,000. Copra alone amounts to four-tenths of 1 percent of agricultural exports.

Kola nuts. -- Kola nuts are indigenous to Ashanti and the Eastern Region. They are handled on an open-market basis by African collectors and traders and are not price-fixed. In 1956 kola nuts also amounted to four-tenths of 1 percent of agricultural exports.

Kola trees grow wild and may reach a height of 50 feet. Climbing the trees to cut down the nuts is a hazardous occupation. Furthermore, the collectors are often attacked by ants.

The nuts are chewed for their stimulating effect, since they contain both theobrine, the stimulant of cocoa, and caffeine, the stimulant of coffee. In West Africa, chewing a kola nut often takes the place of smoking a cigarette. The nuts are especially prized by the Moslem inhabitants in the drier regions of Africa, south of the Sahara. Most nuts go to the Northern Region of Ghana, to the French territories adjoining Ghana, and to Nigeria. The whole nuts keep for several months if properly cared for.

Kola nuts weighing 3,500 long tons and worth $520,000 were exported in 1955. In 1956, 4,000 long tons worth $654,000 were exported.

Coffee. -- About 3,800 acres of coffee are in cultivation, of which about 2,000 acres are in Trans-Volta Togoland. Nearly all of the coffee is of the Robusta (sometimes called Congo) variety, a hard and disease-resistant coffee with a rather coarse flavor. It thrives at much lower elevations than milder Arabica coffee. Robusta is a quick-growing and quick-maturing coffee, with fruit beginning to be produced about 3 years after planting. The coffee plants are really small trees and might grow 30 feet high if left unhindered. In practice, the coffee trees are pruned to 5 or 6 feet tall to make picking easy from the ground. Small amounts of Arabica coffee are also grown.

The Agricultural Development Corporation fixes prices, purchases, and exports coffee. In 1956, coffee exports were less than three-tenths of 1 percent of all agricultural exports.

Domestic Food and Feed Crops

Estimates of the area and production of main food crops were made in 1950. These estimates give a reasonably accurate picture of the relative importance of these crops at present. Little, if any, of these crops is exported.

Principal domestic food crops: Area and production, 1950

Crop	Area	Production
	1,000 acres	1,000 long tons
Plantains	313	1,256
Cocoyams	200	510
Cassava (manioc)	204	504
Yams	148	474
Corn	354	166
Millet	432	97
Sorghum	332	78
Peanuts	136	29
Rice	48	22

Plantains. -- Plantains, a starchy cooking banana, are grown solely for domestic food. Plantains are larger, coarser, and thicker-skinned than the luxury fruit, bananas. Estimates of food crops made in 1950 showed plantains in first place in weight of food produced in Ghana, although not in area in "cultivation."

Plantains grow from transplanted suckers, bear in 12 to 15 months, and continue to bear for 4 or 5 years. They grow best in high forest country where they have some protection from high winds. About 400 bunches of fruit are harvested from an acre.

Cocoyams. -- This "elephant ear" food crop is propagated from pieces of "seed" (underground stems) and is usually ready for harvest 12 to 18 months after planting. The 8 to 10 cormels formed around the corm are usually harvested for food. The corm may be left to produce more cormels or more pieces of seed planted in the same place.

In preparing for food, the cormels are peeled to remove the fibrous husk and are then boiled, after which they are pounded in a mortar into a sticky mass known as cocoyam "fufu." The young leaves, rich in vitamins and mineral salts, are cooked for food. The large grown leaves make an excellent shade, and the cocoyams are often grown as a cover crop for young cacao trees.

Cassava (manioc). -- Cassava, one of the most productive food crops in the world, is an important item of food in the Eastern and Western Regions and Ashanti, and is replacing the yam and cocoyam in Ashanti. Its food value is found in the starchy roots and also in the leaves, which contain protein, vitamins, and calcium.

Cassava is one of the easiest crops to plant and grow. Propagated from pieces of tuber 6 to 8 inches long, it grows into a plant 4 to 8 feet tall. Cassava can live through dry periods and resume growth when the rains return. Roots may be dug at intervals and the plant allowed to continue growing, all the roots may be dug on maturity, or the roots may be left in the ground for a year and a half or longer. This storage quality makes cassava a valuable stand-by crop to prevent "hungry periods" as it can be dug and used when other foods are not readily available.

Yams. -- Yams (not to be confused with sweetpotatoes sold as "yams" in United States grocery stores) are an annual crop grown in the Northern Region as well as in forested and coastal areas of Ghana. Whole yams or pieces of yam are used as seed, as in planting Irish potatoes. This method of planting is necessarily wasteful, as an appreciable portion of the previous year's crop must be saved for seed. The seed pieces are placed in hills of earth 2 to 4 feet high. When the vines sprout and grow long enough, they are trained to run on poles about 6 feet tall, somewhat like string beans.

Corn. -- Corn is grown in all parts of Ghana, including the Northern Region. Planting of the main crop begins in February and harvesting begins in June. In regions where there is enough fall rain, a second crop of corn is often planted in September and harvested the following year. The "small rains" on the coastal plains cannot be relied on and the second crop is often a failure there.

Ghana corn is not good enough for export, even if it were not needed locally. Weevil damage is substantial. Most corn is stored on farms and consumed or fed to poultry on the farms where grown. For human consumption it is often pounded into coarse meal or finer-textured flour at home. Many villages have corn mills for grinding corn flour and meal; they are the equivalent of the grist mill in the southern United States. Corn is fed to poultry either cracked or whole.

Since 1951, in years of high humidity, corn has been damaged by rust. Some imports of corn were required. However, substantial progress has been made in selecting and distributing seed of new rust-resistant corn varieties from Central America and Mexico.

Millet. -- Bullrush or pearl millet, native to West Africa, is an important food in the dry Northern Region. Planting begins in the spring when the rains begin, and harvesting is from July to December. Millet is drought-resistant and needs hot, dry weather when maturing. When used for food, millet is ground and made into porridge. It also makes an excellent chicken feed.

Sorghum. -- Sorghum, known in Ghana as Guinea Corn, is an important food and feed crop in the Northern Region. It requires considerably less moisture than corn and needs dry weather when maturing. When ground into flour it is used for making porridge for human food. The whole grains are fed in limited quantities to chickens and other livestock.

Peanuts. -- The relatively small tonnages of peanuts harvested in Ghana are important for the protein they contribute to the diet. Called groundnuts in Ghana they are grown in all parts of the country, with concentration in the Northern Region.

Peanuts are an annual crop, propagated by planting the nuts in rows in open fields. The most popular varieties are "runner" peanuts, so-called because the stems "run" or lie flat on the ground. In turn, groundnuts are so-called because the nuts grow beneath the surface of the ground although still attached to the above ground stems. When mature, the plants are pulled up and allowed to dry. The peanuts are then plucked from the dry plants by hand. Before use, the peanuts must be shelled (or "decorticated"). They are then eaten raw or roasted or pounded into a paste (like American peanut butter) for use in making groundnut soup, rich in oils, carbohydrates, and proteins. Oil pressed from peanuts is used in cooking.

Rice. -- While rice is the world's most important cereal and a food crop being promoted by the British and French Governments in West Africa, it is of minor importance in Ghana. If the Volta River Project is carried to completion, rice is expected to be an important "flooded" crop in the Accra Plains.

Swamp rice is now grown in fresh-water swamps of the Nzima District of the Western Region and in the Apollonian district. At present, swamp rice is grown by natural flooding, not by irrigation. Native varieties do best in the varying depth of water. Introduced varieties are accustomed to a uniform depth of water during the growing season.

Upland rice is grown in the Northern Region, particularly by the Dagomba people.

Native brown, yellow, or reddish varieties are preferred by Ghanaians over white, introduced varieties.

Locusts, rice birds, and African ground rats harm the crops. In mangrove swamps, even fish eat part of the crop.

About 590 long tons are hulled and polished annually at the Government Rice Mill at Esiama. Commercial hullers also process part of the crop.

Citrus fruits. -- Two thousand to three thousand acres of lime trees near Cape Coast supply two small factories which can lime juice for export. Production has declined recently because of a virus (tristeza type) disease of the trees. Most locally grown oranges and grapefruit are eaten in Ghana. Lemons and tangerines are grown in small quantities.

Other fruits and vegetables. -- Several other kinds of fruits and vegetables are available in season, particularly in the south where rainfall is adequate. Ghanaians like mangoes. Young children eat easily-digested pawpaws, or papaya, before they are given more solid food. Avocado pears grow well. Pineapples sell readily in local markets but find stiff competition abroad.

Ghana farmers grow beans, pumpkins, melons for oil seeds, cucumbers, tomatoes, eggplant, peppers, shallots, onions, garlic, and okra. Indian spinach or vine spinach is often seen. The Ghana women cook the leaves of lima beans, cassava, and other plants for greens. Where rainfall is uniformly adequate, harvest seasons are long and two or three succession crops are grown.

Feed crops. -- Ghana farmers do not usually grow feed crops, although many more cattle could be raised in the Northern Region if fodder crops were grown and harvested for feeding during the dry seasons. At present, cattle usually feed on millet and grain sorghum stalks either after threshing or by grazing through the fields during the dry season.

In the south, goats, hogs, and poultry forage for themselves and eat scraps tossed to them by their owners. Some chickens are better fed on peanut-oil cake, coconut-oil cake, corn, grain sorghum, millet, rice or rice bran.

Livestock and Products

The tsetse fly, which infests large areas of Ashanti and the Northern Region, makes raising of livestock a risky and sometimes impossible business. The tsetse is an African blood-sucking fly, somewhat larger than the common housefly. The flies hatch and mature in bush or forest, especially in the undergrowth near the margins of rivers, lakes, and islands. They act as carriers of pathogenic organisms (trypanosomes) which infest the blood of man and various lower animals and damage the health of their hosts by destroying the red corpuscles.

Sleeping sickness is the disease which tsetse flies carry from man to man. In cattle and other animals they carry the disease called "nagana." Horses, sheep, goats, hogs, and dogs are also affected by the trypanosomes transmitted by tsetse flies.

Along with other factors, the diseases spread by tsetse fly keep the livestock industry at a very low level in Ghana. Horses are especially susceptible to tsetse-borne diseases. The almost complete absence of work stock in Ghana is, of course, a deterrent to cultivation of field crops on any appreciable scale. Meat and milk supplies are much below needs because of the tsetse menace. The only cattle to resist tsetse are the small, dwarf, indigenous cattle and the Ndama variety. Even Zebu cattle driven in from the Upper Volta Province in French West Africa are infected before they reach the slaughter pens in Ghana.

Selective clearing of underbrush alongside waterways has been found to be the best method for reducing tsetse flies. If the fly can be overcome and if improved breeds of livestock can be brought in, Ghana's livestock industry can take its rightful place in the economy.

Comparable statistics on numbers of livestock for a series of years are not available. For 1950 and 1953, however, the livestock population in the principal producing areas has been estimated as follows:

	1950 (Thousands)	1953 (Thousands)
Sheep	376	431
Cattle	390	421
Goats	318	377
Hogs	25	31
Donkeys	16	n. a.
Horses	6	6

Apparently, numbers of all types of livestock, except horses, are increasing. Better control of cattle diseases and government aid in digging wells in grazing areas have helped the cattle industry.

Sheep. -- Sheep, most numerous of Ghana livestock, are used mostly for meat rather than for wool or sheepskins. They are raised in small flocks in almost every village.

Cattle. -- Because of nagana, the tsetse fly-borne disease, cattle production is confined mainly to the northeastern part of the Northern Region and to the Accra Plains. The cattle raised in the Accra Plains are mostly the small, dwarf, indigenous variety. The larger, humped Zebu cattle similar to those raised in nearby French territory, can be raised in the north. They could also be raised in the Accra Plains as far as tsetse infestation is concerned, but the dwarf cattle predominate.

Rinderpest (infectious typhoid fever of cattle) is another plague of Ghana cattle.

Goats. -- Goats, like sheep, are found in small flocks in almost every village. They are used for meat, and their skins are used for making leather by local tanners.

Hogs. -- Swine are not significant in the Ghana meat supply. The constant heat does not make curing of hams, shoulders, and bacon an easy matter. Furthermore, Moslems in the north do not eat pork, because their religion forbids it.

Horses. -- The number of horses (6,000) found in Ghana is much smaller than the number which the country needs for work animals and which the economy could support. Here, too, the problem is the tsetse fly, as horses are especially susceptible to nagana, the disease of lower animals transmitted by that insect.

Poultry. -- Poultry is an incidental product of the villages. In 1953, Ghana had an estimated 2,200,000 fowl. One of the major obstacles to poultry production in the tropics is the prevalence of highly infectious diseases, which only sanitary conditions and careful feeding can combat. Newcastle Disease (fowl pest) is especially harmful, killing off 50 percent or more of the chickens each year. The disease can be fairly well controlled by the wing web vaccine. Guineas appear to be immune to Newcastle Disease. Since most poultry are allowed free range and must browse for feed, losses are high and production is low.

In villages, bantam chickens are more numerous than larger birds. Turkeys are raised in a number of villages. There are some geese and ducks. The native guinea hens are abundant in the north.

Livestock products. -- Despite the upward trend of livestock production and the small amount of meat consumed, the country does not raise enough livestock to supply its meat requirements, nor is it likely to do so in the near future. Many cattle drives originate in French areas far beyond the Ghana borders. Merchants or traders purchase the cattle from farmer-livestock raisers and have them driven to market. As the drive proceeds southward, cattle are sold and bought. Often losses by death during such a drive exceed 15 percent, and the surviving cattle are in extremely poor condition at the end of the drive when they are finally sold to local butchers.

Imports of principal livestock for food have been increasing:

	Cattle (Thousands)	Sheep (Thousands)	Goats (Thousands)
1946	10	95	60
1947	20	82	48
1948	47	109	16
1952	62	139	103
1953	65	139	105
1954	68	131	114

Meat is the principal product obtained from livestock grown in Ghana or imported as live animals. The rural people, however, eat little meat, reserving it chiefly for religious and other festivities. Imports supply two-thirds or more of the cattle, sheep, and goats slaughtered for meat. Slaughter in 1954 has been estimated as follows:

	Thousands
Cattle	98
Sheep	173
Goats	152
Hogs and others.	21

No data are available on the production of other livestock products. Sheep are raised primarily for meat and hide products; they are of the long-haired variety unsuitable for wool production. A small quantity of hides and skins (100 long tons in 1956) is exported.

Dairying is not practiced but some milk is available locally from goats. In 1956, about 4,900 long tons of fresh and preserved milk products, valued at $2,092,000, and 300 long tons of butter, valued at $335,000, were imported. Imports of meat, as of live animals, have been expanding in recent years.

INTERNATIONAL TRADE

Exports of Agricultural Commodities

Agricultural exports have always played a very important part in the economy of Ghana and are a substantial earner of foreign exchange, including dollars for the sterling bloc. In recent years, agricultural products have made up three-fifths or more of the country's total exports. In 1956, cocoa products alone accounted for 98 percent of the value of agricultural exports and for 60 percent of the value of all exports.

Other agricultural products -- chiefly palm kernels, copra and coconuts, kola nuts, and coffee -- are exported in sizable quantities, but are relatively insignificant in relation to cocoa.

In 1956, Western Germany took 25 percent of Ghana's exports of cocoa (beans, butter, and paste), the United States 21 percent, the Netherlands 16 percent, the United Kingdom 16 percent, USSR 4 percent, Australia 4 percent, Italy 2 percent, France 2 percent, and other countries 10 percent.

The United Kingdom took 85 percent of Ghana's exports of palm kernels, with the remainder going to French Togo.

Copra went mostly to the United Kingdom (51 percent), the Netherlands (24 percent), and French Togo (20 percent).

Fifty-three percent of the kola nuts exported went to the Ivory Coast and Upper Volta in French West Africa, 31 percent to Nigeria, and 15 percent to French Togo.

The United Kingdom took 86 percent of Ghana's coffee exports, with the United States taking nearly all the rest.

Exports: Quantity and value of agricultural commodities, 1954-56

Commodity	1954		1955		1956	
	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 long tons	$1,000 U.S.	1,000 long tons	$1,000 U.S.	1,000 long tons	$1,000 U. S.
Cocoa beans	214.1	236,877	205.9	183,565	234.4	142,975
Cocoa butter	.8	500	.01	5	2.7	1,543
Cocoa paste	3.7	2,295	.01	8	1.6	998
Palm kernels	8.9	888	9.6	949	11.5	1,472
Palm oil	.5	140	--	--	1/	1/
Copra	3.6	645	3.0	420	4.7	638
Coconuts	1.0	77	1.0	69	.8	59
Kola nuts	4.7	764	3.5	520	4.0	654
Coffee	.5	383	1.3	950	.8	401
Rubber	.3	72	.2	74	.3	103
Hides and skins	.4	199	.3	113	.1	62
Bananas and plantains	.3	44	.6	44	.6	51
Other agricultural	--	307	--	218	--	227
Total agricultural	--	243,191	--	186,935	--	149,183
Other	--	73,847	--	81,105	--	91,438
Grand total	--	317,038	--	268,040	--	240,621
Agricultural exports as percent of total exports		77		70		62

1/ Not available.

Imports of Agricultural Commodities

Ghana is not self-sufficient in food products and imports much more food in relation to its population than most of the other countries of West Africa. In 1953, for example, Ghana with only 4.5 million people imported more food, drink, and tobacco than Nigeria with its 32 million population. This higher level of imports reflects the higher level of living maintained in Ghana compared with that of surrounding areas; the country's preoccupation with cocoa raising; and the high cost of internal transportation of food products from the areas of production, mainly in the north, to the area of densest population in the south.

Imports: Quantity and value of principal agricultural commodities, 1954-56

Commodity	1954		1955		1956	
	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 long tons	1,000 dollars	1,000 long tons	1,000 dollars	1,000 long tons	1,000 dollars
Live animals for food:						
Cattle (1,000 head)	68	3,731	56	3,548	78	5,308
Sheep (1,000 head)	131	1,155	133	1,204	157	1,576
Goats (1,000 head)	114	737	110	699	133	979
Other (1,000 head)	18	22	24	41	21	30
Meat:						
Fresh, chilled or frozen meat	.5	402	.6	463	.6	476
Salted pork other than bacon and ham	6.7	1,363	7.6	1,593	6.2	1,265
Canned corned meat	1.6	1,425	1.6	1,483	1.8	1,470
Other canned meat	.3	246	.4	309	.4	350
Other meat	.6	409	.7	475	.8	536
Dairy products:						
Milk or cream	4.3	1,721	4.5	1,889	4.9	2,092
Butter	.2	254	.2	295	.3	335
Cheese	.2	129	.2	131	.3	234
Other dairy products	.4	388	.5	535	.5	576
Margarine	.3	170	.8	392	.5	264
Shortening (including lard)	.1	75	.2	136	.1	80
Eggs	--	149	--	156	--	164
Cereals and preparations:						
Rice	2.7	616	4.4	853	8.8	1,578
Corn	.6	63	.2	27	1.1	164
Wheat flour	31.0	5,558	33.5	6,040	34.7	5,780
Prepared cereals	.4	145	.3	128	.4	156
Malt	.6	111	.8	135	.7	130
Cabin bread	1.8	532	2.3	680	1.8	555
Other bakery products	.6	519	1.1	777	1.0	769
Other cereals and preparations	.1	65	.1	67	.1	76
Fruits and nuts	.7	172	.8	214	.7	214
Jams and marmalades	.4	196	.5	210	.9	317
Fruit juices, 1,000 Imp. gal.	33	76	45	104	47	103
Vegetables:						
Potatoes	1.3	122	1.4	133	1.2	125
Beans, peas, lentils	.3	57	.4	67	.7	148
Onions and garlic	.7	130	.6	92	.8	125
Other fresh and dry vegetables	.2	58	.2	67	.2	74
Canned vegetables	1.1	404	1.0	389	1.0	410
Sugar	22.8	3,583	28.5	4,529	31.2	5,286
Coffee	.1	145	.2	287	.1	185
Cocoa, chocolate and preparations	.1	108	.1	160	.1	152
Tea	.1	167	.1	250	.1	256
Wine, 1,000 Imp. gal.	108	272	166	342	126	289
Beer, 1,000 Imp. gal.	2,908	3,793	3,572	4,691	3,711	4,989
Tobacco, unmanufactured	.6	1,167	.6	1,231	.5	1,067
Vegetable oils	.4	355	.7	356	.6	320
Oil seeds, nuts, and kernels	.1	56	.7	277	.3	114
Silk, cotton, wool, jute, etc., fibers	.3	114	.3	110	.2	75
Other agricultural	--	451	--	563	--	604
Total agricultural	--	31,411	--	36,128	--	39,796
Nonagricultural	--	167,822	--	209,901	--	208,945
Grand total	--	199,233	--	246,029	--	248,741
Agricultural imports as percent of total imports		16		15		16

Note: The Imperial gallon is about one-fourth larger than the U. S. gallon.

Imports have been rising in recent years more rapidly than exports.

The United States supplied 63 percent of Ghana's wheat flour and Canada 36 percent.

Live cattle for food were mostly driven in from Upper Volta and the Ivory Coast in French West Africa and from French Togo. The same applied to sheep, goats, and other animals for food.

The United Kingdom supplied 90 percent of Ghana's sugar imports. A large part of the remainder came from France.

Beer came mostly from the Netherlands (79 percent), Ireland (12 percent), the United Kingdom (4 percent), and Western Germany (3 percent).

The Netherlands was the major supplier of milk and cream (90 percent).

Various countries in Asia supplied 42 percent of Ghana's rice imports. Smaller quantities of rice were also brought in from Belgium, the Netherlands, Italy, French Togo, Brazil, and other countries.

Ninety-one percent of Ghana's imports of canned corned meat came from Argentina; 7 percent from Uruguay.

Denmark supplied 71 percent of Ghana's imports of salted pork (other than bacon and ham). The Netherlands supplied another 21 percent of this product.

The United States supplied 99 percent of the unmanufactured tobacco sent to Ghana.

Many miscellaneous food products came from the United Kingdom.

Trade with the United States

Ghana sells mostly cocoa and coffee to the United States. Exports of cocoa are expected to show gradual increases over the years. Ghana coffee may find a receptive market in the United States but quality, price, and long-established Central and South American sources are all potent factors in the competitive picture.

Exports: Agricultural commodities to the United States, 1956

Commodity	Value	Exports to U.S. as percent of total exports
	1,000 dollars	Percent
Cocoa beans	30,430	21
Cocoa paste	32	3
Coffee, not roasted	50	14
Hides and skins (other than cattle)	8	55
Inedible crude animal & vegetable materials	6	25
Dried fruits	4	17
Total	30,530	20

Ghana buys flour, unmanufactured tobacco, and some dairy products from the United States. As the population increases and the level of living rises, Ghana's imports of these and other U. S. agricultural products are expected to increase. Most tobacco imported in the past has been semiprocessed "black fat" tobacco. With the opening recently of a cigarette factory in Ghana, the country may import more unmanufactured tobacco from the United States or it may get at least a part of the tobacco from competitive sources such as Rhodesia.

Since gaining independence, Ghana has shown a desire to have more control of the dollars which it earns in foreign trade.

Imports: Agricultural commodities from the United States, 1956.

Commodity	Value	U. S. percent of market
	1,000 dollars	
Flour	3,652	63
Tobacco, unmanufactured	1,060	99
Cheese	92	39
Butter	55	17
Dry milk and cream	19	14
Malt	13	10
Rice	4	1/
Vegetable oils	4	1
Still wines	3	1
Cereals, prepared	2	1
"Other" canned meat	2	1
Sausages, etc.	1	1
Corn	1	1
Other agricultural	3	1/
Total	4,911	12

1/ Less than 1/2 of 1 percent.

Sources of Foreign Exchange

Ghana is in an excellent position to bring in the hard-to-come-by hard currencies. Its cocoa, wood, diamonds, and gold all attract American dollars, German marks, and British pounds. Ghana is a member of the sterling bloc and an important contributor to the sterling pool. Its present currency is the British West African currency also used in Nigeria, Sierra Leone, and Gambia. The currency is interchangeable with sterling at par. The Ghana Government proposes to issue a national Ghana currency in 1958, which will also be closely pegged to the pound sterling.

Government Policy for Trade

Ghana ordinarily enjoys a favorable balance of trade. In 1954, this amounted to a spectacular $117,805,000. In 1955, the favorable balance was a more modest $22,011,000. An unfavorable balance of trade of $8,120,000 was recorded in 1956.

Under these conditions, Ghana has not had to regulate its import trade too strenuously. It has chosen to regulate by means of open general licenses, quota licenses, and specific import licenses.

Wheat flour from the United States and Canada is imported under Open General License No. 12. This is the only dollar product, agricultural or nonagricultural, included in an open general license.

Sugar is imported under Open General License No. 13 from Australia, South Africa, Belgium, Czechoslovakia, France, Federal Republic of Germany, Netherlands, Poland, and U.S.S.R.

Goods from the Sterling Area (including the United Kingdom, Australia, Burma, Ceylon, Eire, Jordan, Libya, Iceland, India, Iraq, New Zealand, Pakistan, South Africa, South-West Africa, Southern Rhodesia, and all British colonies) are allowed entry into Ghana with few exceptions. These exceptions include petroleum products, movie films, and gold. These provisions are found in Open General License No. 6.

Three other valid open general licenses (Nos. 1, 2, and 3) do not mention the United States.

Quota licenses are required for a wide range of specified goods imported from Albania, Bulgaria, Czechoslovakia, French Somali Coast, Hungary, Lebanon, Poland, Roumania, Sudan, Syria, U.S.S.R., and Yugoslavia. In spite of the designation, "quota," any goods named in this license may be imported without regard to quantity.

All imports not covered by open general or quota licenses require specific licenses. It can be seen that, except for flour, all imports from the United States must be covered by specific licenses. However, the necessity for obtaining specific licenses has not kept out U. S. products, notably unmanufactured tobacco.

Exports from Ghana are made under open general export licenses. Under Open General Export License No. 1, coconuts, rubber, and a number of other products may be exported to the United Kingdom. A long list of products (including fresh fruits other than bananas, kola nuts, piassava, and hides and skins) may be exported to any country under this general license.

Cocoa beans require a specific export license. However, the wide distribution of cocoa exports shows that these licenses are rather freely granted.

LONG-RANGE OUTLOOK FOR AGRICULTURE

Production

There seems to be no need for expanding cocoa production, for which adequate enthusiasm and marketing machinery exist at present. The need for additional export crops, for more adequate domestic food crops, and for increased livestock production is apparent. If market procedures and facilities can be worked out, more export crops can be grown. Domestic food production appears to be a fertile field for extension work. Elimination of the tsetse fly is, of course, a prerequisite to any large-scale expansion of livestock raising.

Export crops. -- Any rise in cocoa production will follow world population increases. Officials in Ghana feel that the percapita consumption of cocoa in Western Europe is about as high as could be expected. But they do feel that percapita consumption in the United States could be increased.

Exports of kola nuts, palm kernels, and copra will probably continue at about present levels. Palm oil, now all used domestically, will probably not appear again in export channels.

Prospects for expansion of exports of bananas and coffee appear excellent. If required quality standards can be reached, there may be a good overseas market for Ghana citrus fruits and pineapples.

Domestic food and feed crops. -- More adequate domestic food and feed crops are needed in Ghana. Cocoa farmers may have to be convinced of the importance of raising food crops too. More efficient transportation and distribution of food and feed crops would also help Ghana to supply more of its own needs.

Livestock and livestock products. -- Elimination or reduction of the tsetse fly, improvement of livestock species, and construction of better slaughter, cooling, and curing facilities are all prerequisites to a better livestock industry in Ghana. As with domestic food crops, more efficient transportation and distribution facilities are needed for livestock and livestock products.

Consumption

Population growth. -- The 1948 census showed a population of 4,118,450, of which 4,111,680 were Africans, 4,211 British, 1,370 Lebanese and Syrian, and 1,189 other. The 1955 mid-year estimate showed a population of 4,620,000. Population growth is about 1-1/2 percent per year. Future population growth is rather hard to predict. The death rate will undoubtedly drop as the many diseases (some tropical) that trouble Ghana are reduced or exterminated. Among the tropical diseases are leprosy, yaws, hookworm, river blindness, sleeping sickness, bilharzia, and malaria. Other prevalent diseases include tuberculosis, venereal diseases, and diseases aggravated by malnutrition. If industrialization proceeds as hoped for and the level of living rises, the birth rate is likely to decrease.

Immigration into Ghana may be another factor in population growth in the future. Some immigration has taken place in years past--mostly from British and French territories in West Africa--and future immigration may take place from the same countries at an accelerated rate.

While the net population increase in years ahead is unpredictable, it seems certain that the rate of increase will equal or exceed the current rate of about 1-1/2 percent per year.

Industrialization. -- Ghana, along with numerous other emerging African countries, bases its hope for a good future on industrialization. The focal point of industrialization is the Volta River Project, which has been thoroughly surveyed and found to be economically and technically feasible. This huge project, costing several hundred million dollars, would provide electric power for processing local bauxite ores into aluminum. Some water would be available for irrigation of the Accra Plains.

The present government is strongly committed to carrying the Volta Project to completion. The Prime Minister, Dr. Kwame Nkrumah, has said, "The Volta is my baby and my ambition." Development funds from overseas will be necessary for construction of the Volta River Project, and, so far, the funds have not been found.

Standard of Living

The inhabitants of Ghana range from Africans living under the most primitive conditions, particularly in the Northern Region, to highly educated and Europeanized lawyers and government officials. Between, a large proportion of the population is engaged in agriculture, a situation not likely to change for several decades.

Nonetheless, the standard of living in Ghana has increased steadily if slowly in past years. With crop diversification, industrialization, urbanization, and improvement in roads, communications, and distribution, further rises in the level of living are confidently expected.

U. S. Share of Agricultural Trade

As has been mentioned, flour and unmanufactured tobacco are the largest imports of agricultural products into Ghana from the United States. Small, although significant, imports of cheese, butter, dry milk and cream, and malt are also made. The U. S. share of the market in these products is expected to increase or at least to continue in as large proportion.

As industrialization progresses, the United States will undoubtedly furnish still other agricultural products. If cotton mills are built in Ghana, the United States may furnish raw cotton for them. As supermarkets are built in Ghana, the United States may furnish a wide range of grocery store items for Ghana dining tables. When a new department store was opened in Accra in 1958, among items in stock were United States canned meats and frozen pies (beef, turkey, and chicken). Perhaps this is a straw in the wind which portends larger and more diversified imports of agricultural products from the United States in the years to come.

Subject to vagaries of supply, demand, and competition, United States purchases of Ghana cocoa and other export crops are expected to be at least as large in proportion as they are at present.

SELECTED LIST OF REFERENCES

Ghana, Department of Agriculture. Annual Report for the Year 1954-55. Accra, 1957.

Ghana, Department of Soil and Land-Use Survey. Report for the Period 5th June, 1951 to 31st December, 1955. Accra, 1957.

Ghana, Ministry of Commerce and Industry. Handbook of Commerce and Industry. Accra, 1957.

Gold Coast. Annual Report on External Trade, 1954, 1955. Accra.

Gold Coast. Monthly Accounts Relating to the External Trade of the Gold Coast, December 1956. Accra.

Gold Coast, Department of Information Services. The Volta River Project; What It Means to You. London, undated.

Irvine, F. R. A Text-book of West African Agriculture; Soils and Crops, 2d ed. London, Oxford University Press, 1953.

Pedler, F. J. Economic Geography of West Africa. London, Longmans, Green and Company, 1955.

United Kingdom. Colonial Reports: Gold Coast. Various annual issues, 1946-54. London, Her Majesty's Stationery Office.

United Nations, Food and Agriculture Organization. Report on the World Census of Agriculture, v. 1. Rome, 1955.

U. S. Bureau of Foreign Commerce. Basic Data on the Economy of the Gold Coast. Washington, 1957.